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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,313	01/09/2002	Randolf Hugo	217475US0PCT	7463

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ALEXANDRIA, VA 22314

EXAMINER

VANOY, TIMOTHY C

ART UNIT	PAPER NUMBER
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1754 .

8

DATE MAILED: 06/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,313

Applicant(s)

HUGO et al.

Examiner

VANDY

Group Art Unit

1754

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to THE PRELIMINARY AMENDMENT JAN. 09, 2002 communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-10 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-10 is/are rejected.

☒ Claim(s) 1 is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some* ☐ None of the:

☒ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 5, 7

☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

Office Action Summary

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The "Germany 15 42 415" and the "Germany 19 04 428" references contained in the information disclosure statement date-stamped April 15, 2002 (paper #5) have not been considered because copies of these references have not been submitted.

Claim Objections

- a) In claim 1 line 15, "and" (1st occurrence) should be replaced with "from", and "loaden" should be replaced with "loaded".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention.

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a) In claim 1, the word "especially" renders the claim vague and indefinite: please see the discussion of the court decisions set forth in section 2173.05(d) in the MPEP (Feb. 2003).

b) In claim 8, the word "preferably" renders the claim vague and indefinite: please see the discussion of the court decisions set forth in section 2173.05(d) in the MPEP (Feb. 2003).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The person having "ordinary skill in the art" has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. 4,336,233 in view of GB 2 191 419 A.

U. S. Pat. 4,336,233 in col. 2 Ins. 23-25 describe a process for purifying gases such as natural gas or synthesis gas and claim 1 in U. S. Pat. 4,336,233 describes this process as:

contacting the gas with a scrubbing liquid comprising 0.05 to 0.8 moles/liter of piperazine (please compare this to the piperazine activator set forth in at least applicants' claims 1, 6, 9 and 10) and 1.5 to 4.5 moles/liter of methyldiethanolamine (please compare this to the methyldiethanolamine tertiary aliphatic alkanolamine of applicants' claims 1, 4, 8 and 10) at a temperature of 40 °C so that the hydrogen sulfide and carbon dioxide are scrubbed out of the gas, and

regenerating the loaded scrubbing solution so as to remove the contaminants out of the scrubbing solution.

The difference between the applicants' claims and U. S. Pat. 4,336,233 is that applicants' claims 1 and 7 call for the removal of mercaptans out of the fluid.

Pg. 1 Ins. 5-12 in GB 2 191 419 A describes a process for removing sulfur compounds (to include mercaptans) out of natural gas or synthesis gas and pg. 1 Ins. 49-52 and ln. 61 in GB 2 191 419 A sets forth that tertiary amines (to include the methyldiethanolamine of the applicants' claims and U. S. Pat. 4,336,233) to remove sulfur compounds to include mercaptans out of the natural gas or synthesis gas.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made *to further describe* the process set forth in U. S. Pat. 4,336,233 as *also* removing mercaptans out of the fluid, in the manner set forth in at least applicants' claims 1 and 7, *because* the disclosure set forth on pg. 1 Ins. 5-12 and Ins. 49-61 in GB 2 191 419 A renders obvious and is evidence that the methyldiethanolamine of claim 1 in U. S. Pat. 4,336,233 and also of the applicants' claims removes the mercaptans that are inherently present in the same natural gas and synthesis gas that the processes of U. S. Pat. 4,336,233 and GB 2 191 419 A treat.

The following references, which are indicative of the state of the art, are made of record:

U. S. Pat. 6,337,059 B1 disclosing a process for the removal of acid gases from a fluid with a scrubbing solution containing piperazine and methyldiethanolamine;

U. S. Pat. 6,277,345 B1 disclosing a process for the purification of gases using an absorption liquid, and

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U. S. Pat. 5,589,149 disclosing a process for the removal of mercaptans from a gas stream.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 703-308-2540. The examiner can normally be reached on 8 hr. days.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Timothy Vanoy/tv
May 29, 2003


Timothy Vanoy
Patent Examiner
Art Unit 1754